The Aral Sea: Salvaging Remnants of a Once Great Sea

The Aral Sea was once the world's fourth-largest inland sea. Its problems began in the 1960s and 1970s with the diversion of the main rivers that feed it to provide for cotton in arid Soviet Central Asia. The sea is now a quarter of the size it was 50 years ago and has broken into two parts, the North Aral Sea (NAS) and the South Aral Sea (SAS). A new study says the southern part of the Aral Sea will all but disappear within 15 years.

The surface of the Aral Sea once measured 66,100 square kilometers.

By 1987, about 60% of the Aral Sea's volume had been lost, its depth had declined by 14 metres, and its salt concentration had doubled, killing the commercial fishing trade by 1984.

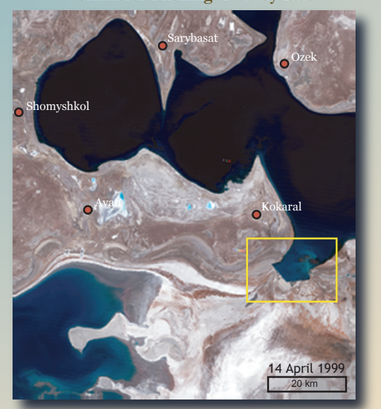
The once great sea is now fragmented into a North and South Sea, the South Sea will soon divide again. Wind storms become toxic, carrying fine grains of clay and salts deposits.

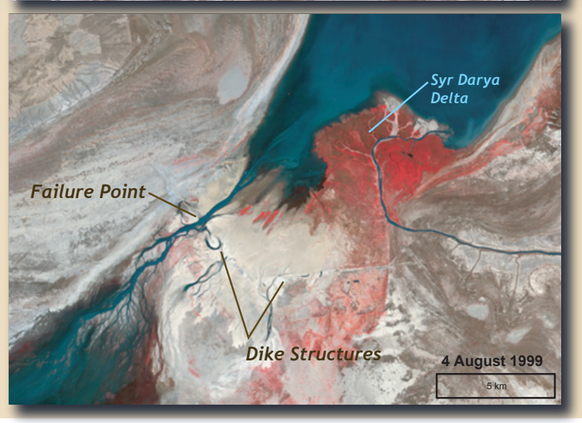
In late 2000, Vozrojdeniya Island joined the mainland of Uzbekistan to the South. The new peninsula now divides the South Aral Sea.

A quick visual analysis reveals rapid desiccation of the South Aral Sea in just one year. Estimates of 15 years before it disappears may be optimistic?

Local efforts to salvage the North Aral Sea

Efforts to divert and retain water in the NAS from the Syr Darya basin began in 1992. At Kokaral, the uninhabited place where the Syr Darya flows into the sea, stand the remains of a dike that volunteers built 10 years ago. Made of sand, with no sluice to prevent the water from going over the top and no stone cover on the sea side to stop erosion, the dike repeatedly breached. The last time, in 1999, two people drowned.





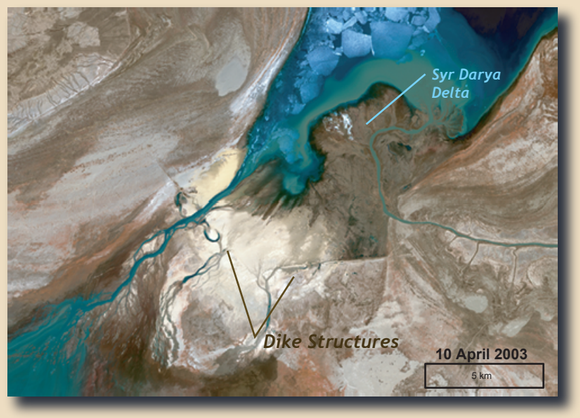
Satellite Perspective

The Landsat images display the latest dike breach between the two seas. Note the significant water level drop in the NAS and the expansion of wet areas in the SAS. Much of the released water will evaporate as it spreads thinly over the former seabed of the SAS.

Permanent Separation of the Seas

The World Bank has financed the Syr Darya Control and NAS Phase I Project. The project seeks to sustain and increase agriculture and fish production in the Syr Darya basin, and secure the existence of the NAS by improving ecological and environmental conditions in the delta area. Syr Darya water will be prevented from flowing into the SAS, where it has been losing a battle with evaporation. Instead, it will flow to the NAS, which in four years engineers expect to rise 3.3 m and recover 370 square km of exposed former seabed.

Then a sluice will be opened, and the excess water will be allowed to flow south again into the SAS. The World Bank project includes rebuilding waterworks along the Syr Darya to increase the flow of the waterway substantially.



Latest Imagery

This Spring 2003 image shows little change in the delta region since 1999. Lack of red color indicates dormant vegetation, and white irregular shapes in the water are ice formations. Construction on the dike started in 2003, and will resume in 2004, permanently isolating the two Seas by 2007.

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Design and Graphics by Mark A. Ernste